

# TRANSPORT ENGINE AND DRIVE ARRANGEMENT

## Abstract

A parallel engine and transmission drive arrangement with application to both land and marine vehicles reduces the large moment arm and moment about the rear axle in the case of land vehicles, and improves trim and stability and more compact arrangement of the drive arrangement in the case of a marine vessel. The arrangement is applicable to, for example, buses, tractor-trailer rigs, towing, dump trucks, garbage trucks, concrete trucks, fire trucks, recreational vehicles, and boats or ships. In one aspect, the engine and transmission are laterally arranged in a parallel manner. This significantly shortens the longitudinal distance necessary in rear-mounted engine designs from about 120 inches to as little as 54 inches. The large moment arm found about the rear axle in conventional rear-mounted engines is significantly reduced, and the transfer case performance requirements are relaxed, resulting in a transfer case with less bulk and weight.